

opinion about the limits of the geographical divisions, as there is in the case of species, genera, etc., but there should be none about the relative abundance of the species after the regions are once defined, and explored sufficiently.

ROLAND M. HARPER

PROCEEDINGS OF THE CLUB

FEBRUARY 28, 1917

The meeting of February 28, 1917, was held in the morphological laboratory of the New York Botanical Garden at 3:30 P.M. with Vice-President Barnhart in the chair. Twenty-two persons were present.

The minutes of the meetings of January 31 and February 13 were read and approved. Dr. Michael Levine reported that the editorial board had cordially endorsed the proposition of Dr. Jean Broadhurst in regard to publishing in *TORREYA* a greater number of abstracts and reviews of botanical literature.

For the committee appointed to consider the application of Mr. Norman Taylor for a grant of \$200 from the Esther Herrman Fund, Dr. Marshall A. Howe made a preliminary report to the effect that the income of this fund had for the present been set aside for the promoting of the natural history survey of Porto Rico.

A communication was read announcing the death of one of the Club members, Mrs. Cynthia Wood, on February 7. There was read also a letter announcing the death of Rev. E. J. Hill, a well-known botanist of Chicago, who had been for many years a subscriber to the Club's publications.

The resignations of Dr. Chester A. Darling and Mr. Joseph E. Brown were accepted.

The following persons were elected to membership: Professor O. S. Morgan, Columbia University, N. Y. City; Prof. H. C. Beardslee, Asheville, N. C.; Mr. Harry Braun, Columbia University, N. Y. City; Prof. J. Franklin Collins, 468 Hope St., Providence, R. I.; Mr. G. E. Meckstroth, University Club, State College, Pa.

The first number on the announced scientific programme consisted of a paper on "Two Long Island Peat Bogs" by Dr. Roland M. Harper. The speaker's abstract follows:

"Two interesting peat bogs, of approximately the same size, but about forty-five miles apart and differing considerably in vegetation, were described, and photographs of them exhibited.

"The first is Juniper Swamp, near Maspeth, Queens County. It is in a thickly settled neighborhood, and the peat in it is said to have been utilized to some extent in the first half of the nineteenth century. The trees are *Betula populifolia* and *Acer rubrum*, but most of them have been cut out from time to time, presumably for fuel. The commonest shrub, or shrub-like plant, making about half the total bulk of vegetation, is *Decodon verticillatus*, which renews its aërial parts every year. Other shrubs are mostly of the Ericales, including *Chamaedaphne*, which is not known elsewhere within thirty or forty miles. The commonest herb is *Triadenum virginicum*, and the occurrence of *Sagittaria Engelmanniana* is noteworthy. There is not much *Sphagnum*, and the peat affords a pretty firm footing.

"The other bog is at the north end of Lake Ronkonkoma, and is probably an old arm of the lake, cut off by a sand-bar. The trees on it are *Acer rubrum* and *Nyssa*, all rather small. *Chamaedaphne* is by far the commonest shrub, and about 75 per cent of the shrubs are of the Ericales. Herbs are numerous, especially in the wetter portions, and this is one of the few known Long Island localities for *Gyrotheca tinctoria*. *Sphagnum* is abundant and the bog very spongy.

"The differences in vegetation between these two bogs seem to be correlated with differences in the chemical composition of the water, which in turn depends largely on the soil of the surrounding country, which is rich loam in the first case and mostly sand in the other."

The second paper "On Some Rocky Mountain Pentstemons" was presented by Dr. Francis W. Pennell. The following abstract was furnished by the speaker:

"In the summer of 1915 the speaker collected Scrophulariaceae in the central Rocky Mountain States, studying the species

living, and, besides a large number of dried specimens, bringing back floral descriptions and other records of field observations. Based primarily on this field work, but extended to include the revision of most extant herbarium material from the states of Colorado, Utah, Wyoming and from southeastern Idaho, a summary of our knowledge of the species of Pentstemons within those states has been attempted. 84 species are now recognized, grouped in 19 sections. Specimens of all the species represented in the Garden herbarium, were shown and points of taxonomic affinity or range were discussed. This revision is to appear in the Bulletin of the Club."

Adjournment followed.

MARSHALL A. HOWE,
Secretary pro tem.

MARCH 13, 1917

The meeting was held in Schermerhorn Hall, Columbia University, at 8:15 P.M. President Richards presided. There were 35 persons present.

The regular order of business was dispensed with.

The lecture of the evening was given by Mr. Louis Schmidt, Rockefeller Institute for Medical Research, on "Methods of Modern Illustration." Mr. Schmidt gave a brief outline of the history of the various methods used in illustration, such as wood engraving, steel engraving, etching and lithographing.

Owing to the considerable expense incurred in connection with many of these processes, they have been largely superseded by such methods as the half-tone process, zinc etching, photolithography, and photograveur. The speaker emphasized the point that the modern processes, while much cheaper, failed to reach the degree of excellence to be obtained by the older processes of lithography. The four-color process of making illustrations was described in some detail. The lecture was illustrated with many examples of work done by these methods. Lantern and epidiascope were used during the evening.

Meeting adjourned.

B. O. DODGE,
Secretary